

## **Methods for Stabilizing Proteins**

### **Abstract**

In basic research and drug discovery there is a need to provide protein reagents with high activity. In particular proteins that are used in assays must have a good shelf life and a consistent activity. As a system of measuring actin polymerization, pyrene labeled actin was developed in 1983 by Kouyama and Mihashi. However, prior to this disclosure, pyrene actin has been impossible to store for longer than one month because the activity would be lost due to protein denaturation and frozen pyrene actin immediately lost activity. This disclosure relates a method for stabilizing pyrene labeled actin for extended storage times and an optimal storage buffer thus creating a reproducible source of pyrene actin for various assays. Using the processes described herein, pyrene actin has been stored for greater than 3 years at 4°C which makes it a viable product for retail.